

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 June 2001 (14.06.2001)

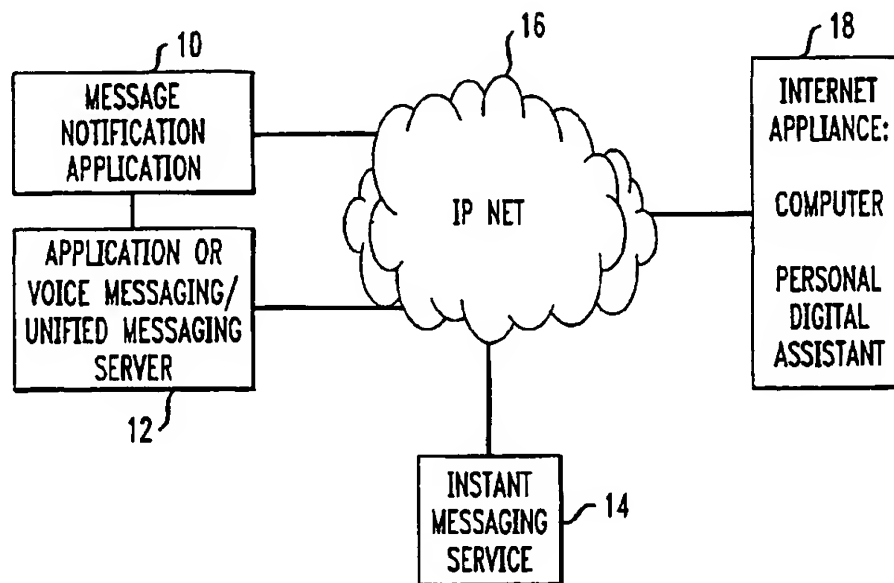
PCT

(10) International Publication Number
WO 01/43357 A2

- (51) International Patent Classification⁷: H04L 12/00 (74) Agents: **HAVERSTOCK, Thomas, B.** et al.: Haverstock & Owens LLP, Suite 420, 260 Sheridan Avenue, Palo Alto, CA 94306 (US).
- (21) International Application Number: PCT/US00/42599
- (22) International Filing Date: 4 December 2000 (04.12.2000) (81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/169,735 8 December 1999 (08.12.1999) US
09/697,113 25 October 2000 (25.10.2000) US (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant: **AVAYA, INC** [US/US]; 211 Mount Airy Road, Basking Ridge, NJ 07920 (US).
- (72) Inventors: **BOUCHARD, Louis**; 111 Brookwood Drive, Santa Cruz, CA 95065 (US). **DONALDSON, Dustin**; 3428 Isherwood Place, Fremont, CA 94536 (US). Published: — Without international search report and to be republished upon receipt of that report.

[Continued on next page]

(54) Title: INSTANT MESSAGE NOTIFICATION APPLICATION



(57) Abstract: A more efficient message notification system utilizing technology found in Instant Messaging Services. The more efficient system is achieved by first registering a Message Notification Application with an Instant Messaging Service. A user logs onto the Instant Messaging Service and indicates to the Message Notification Application that the user would like to be notified when new messages arrive. The Message Notification Application then adds the user to its own buddy list. The user is notified by the Message Notification Application through the Instant Messaging Service when a message is received. The user can then retrieve messages through an internet appliance with sound capabilities, or by utilizing the voice-to-text conversion capabilities of the application from the voice messaging or unified messaging server, or by more traditional methods such as a telephone.

WO 01/43357 A2



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INSTANT MESSAGE NOTIFICATION APPLICATION

RELATED APPLICATIONS:

5 This application claims priority under 35 U.S.C. § 119(e) of the co-pending U.S. provisional application Serial Number 60/169,735 filed on December 8, 1999 and entitled "PATENT SUBMISSION MESSAGING NOTIFICATION." The provisional application Serial Number 60/169,735 filed on December 8, 1999 and entitled "PATENT SUBMISSION MESSAGING NOTIFICATION" is also hereby incorporated by reference.

FIELD OF THE INVENTION:

10 The present invention relates to the field of providing more efficient message notification and delivery. More particularly, the present invention relates to the field of providing new Instant Message notification where and when the user is most likely to see and/or hear notification and allowing the recipient to instantly be aware of and review new messages.

BACKGROUND OF THE INVENTION:

Instant Messaging provides instant communication with another individual or group of individuals utilizing the Internet as a medium and an Internet Appliance (defined here in a more generic sense to mean a desktop PC, a laptop, a simplified PC for Internet connectivity, 20 an Internet phone (WAP phone), a Personal Digital Assistant such as a Palm VII®, a 2-way pager, etc.) as an input/output device.

Instant Messaging services are offered by a number of internet service providers for use by their users. Instant Messaging technology is also very often utilized by the service provider to contact the user about service information as well as for advertising purposes. 25 When a user is utilizing the Instant Messaging Service, a window is brought up onto the user's screen. The window includes many items, including a message line, a dialog box and a buddy list. The buddy list is a user-created collection of possible instant messaging recipients. Instant messaging applications only allow individuals using the same internet service provider to be included on a buddy list.

30 When a user has access has access to the Internet Messaging Service and a member of their buddy list logs onto the Instant Messaging service, the user can be notified in a number of possible ways. For instance, a user can be notified visually by an icon, by a chime or any other user-selected sound notification. In other words, the buddy list allows a user to keep track of the Internet activity of possible Instant Messaging recipients, thus letting the user know when her buddies come online or go offline.

40 When a user wishes to send an Instant Message to someone on her buddy list, the user selects the desired address from the buddy list and enters her message into a dialog box. When the user presses the send button, a window immediately opens on the screen of the recipient with the Instant Message. This window will remain open until it is closed by either

user. The recipient can then respond by entering a message into the dialog box and pressing send. This continues as long as both individuals wish to have a conversation.

Instant Messaging Services are a popular form of communication for a number of reasons. First, the immediate nature of the message delivery is desirable for responses that are needed right away. On the same token, an Instant Messaging Service is a much quicker means of communication than even e-mail. In addition, Instant Messaging users can carry on two conversations at once, and unlike a telephone call, the connection is free.

Other features that are available to an Instant Messaging user include being able to block another user from detecting whether you are online or offline, or being able to block certain individuals from communicating with you. Instant Messaging Services also can feature indicators which tell a user that a certain recipient is not available upon dispatch to that recipient. Most Instant Messaging Services also provide user directories, where a user can choose whether her user name is listed.

Another topic which must be addressed for the purpose of this disclosure is that of message notification systems. Message notification systems are utilized to alert an individual when they have voice, e-mail or fax messages. Examples of current notification methods include a "message waiting" indication light on a phone, "stutter" dial tone on a home phone, an icon or short message on a wireless handset's display, a numeric message to a pager and numerous others.

All of the aforementioned methodologies are in many instances ineffective in that the systems generating the notification cannot detect whether the user is present. Two main problems arise with a high level of frequency. First, in the event that a user is away from her phone or notification device for a long period of time, important messages that require timely responses become obsolete. To alleviate the problem, some systems allow users to "broadcast" notification using several of these methodologies successively. But this is typically more costly to implement, and not necessarily more efficient since the user must anticipate and tell the system beforehand when and where he or she might be reached. It can also become quite annoying for the user to get notified several times of the same new message.

SUMMARY OF THE INVENTION:

The present invention is a method of providing message notification for a user through an Instant Messaging Service. The present invention first registers a Message Notification Application to the Instant Messaging Service. A user utilizing the Instant Messaging Service then signs up for the Message Notification Application, thus indicating to the Message Notification Application that the user wishes to be notified when any messages are received. The Message Notification Application will then add the user to its own buddy list.

After the user is registered with the Message Notification Application and a message arrives for the user, the Message Notification Application sends an instant message to the user

notifying the user of the new mailbox message as soon as the user is on-line. The instant message can include the new mailbox message's envelope. Then, upon the user's request, the messages can be deleted immediately or retrieved from a message server using an internet appliance such as a personal digital assistant, a personal computer or any other internet-connected device or saved for later retrieval. The server in this case can be an application, voice messaging or unified messaging server.

BRIEF DESCRIPTION OF THE DRAWINGS:

Figure 1 illustrates a block diagram of the preferred embodiment of the present invention.

Figure 2 illustrates a block diagram of an alternative embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT:

In the preferred embodiment of the present invention (Fig. 1) a Message Notification Application (Notification Application) 10 is registered to an Instant Messaging Service (Messaging Service) 14 through an IP Network 16 such as the Internet or a private intranet. A user who is already signed up for the Messaging Service 14 indicates to the Notification Application 10 that she would like to be notified when new messages arrive. The user can utilize one of many Messaging Services 14 currently available to the public such as, but not limited to, AOL Instant Messenger®, MSN Messenger®, Yahoo! Messenger®, ICQ® or any privately-provided instant messaging service. When a number of users utilizing various Messaging Services 14 are signed up for the Notification Application 10, the Notification Application 10 can be registered with multiple Messaging Services 14 to enable it to talk with users regardless of the Messaging Service 14 they are utilizing.

The Notification Application 10 of the preferred embodiment operates on one of an Application, Voice Messaging or Unified Server (Server) 12. The preferred embodiment of the present invention includes the Notification Application 10 and the Server 12 as two separate physical components. Alternative embodiments such as that depicted in Figure 2, can utilize the Notification Application 10 and the Server 12 in the same physical location.

Again referring to Figure 1, when a user accesses the IP Network 16 using an Internet Appliance 18, the user then logs onto the Messaging Service 14. The preferred embodiment of the present invention utilizes a computer as the Internet Appliance 18 for the user to perform this task. However, alternative embodiments of the present invention utilize any Internet-connected device as the Internet Appliance 18 for the user to access the IP Network 16, for instance a Personal Digital Assistant or a digital cellular phone. A voice-to-text converter is implemented in the Notification Application 10 to allow a user to retrieve and read voice messages on an alternative embodiment of an Internet Appliance 18 having no sound capabilities (such as a Personal Digital Assistant).

Also in the preferred embodiment, after logging onto the Messaging Service 14, the user instructs the Notification Application 10 that she wishes to be notified when a new message is received. The Notification Application 10 then adds the user to its own buddy list. As previously stated, the buddy list is a user-created collection of possible Instant Messaging recipients. Adding the user to the Notification Application 10 buddy list allows the Notification Application 10 to alert the user through the Messaging Service 14 of any messages in the user's message mailbox. Here, unlike previous Instant Messaging implementations, the application creates multiple buddy lists with multiple internet service providers to identify who is online and offline regardless of the Internet service provider or Instant Messaging Service employed by the user.

The Messaging Service 14 alerts the user of any new messages by way of an instant message including a message envelope for each new message. The message envelope can include such information as who the message is from, when the message was sent, the subject of the message and whether the message is urgent. Of course the message envelope can include more information or less. This information allows the user to determine if the new message requires immediate response, can be accessed later or can be deleted.

Also in the preferred embodiment of the present invention, when the user is notified through the Messaging Service 14 by the Notification Application 10 of a mail message in his mailbox, the user may access the Server 12 to retrieve these messages. To do this, the user makes a request to the Notification Application 10 using an Internet Appliance 18 or traditional methods such as a telephone to directly access the Server 12. The Server 12 then relays the user's messages to him through a telephone connection or through the Notification Application 10 by means of a sound file that the user can listen to with PC speakers, or read in alternative embodiments, by way of a voice-to-text converter. The preferred embodiment of the present invention does not limit the mail messages to voice mail messages only. All embodiments can provide instant message notification and delivery for a variety of message types such as, but not limited to, voice, e-mail and fax mail messages.

The main benefit of this invention is that it follows the user wherever that user happens to be, and automatically redirects notification messages to whatever device is in use and tailors the message so that the user can access the message using a variety of methods. In other words, regardless of the Internet Appliance 18 used, as long as the user logs onto his Messaging Service 14, he will be notified of any message and be able to retrieve them.

Another benefit is that notification is standardized to all end user points and devices that are compatible with a specific Messaging Service 14. The Notification Application 10 itself does not need to be aware of the specifics these end user points because it merely needs to be instructed how to interact with the Messaging Service 14 framework and offer the message in multiple formats (e.g. sound file, text, etc.).

This invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of the principles of construction and operation of the invention. Such reference herein to specific embodiments and the details thereof is not

intended to limit the scope of the claims and hereto. It will be apparent to those of ordinary skill in the art that modifications can be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention. Specifically, it will be apparent to one of ordinary skill in the art that the device of the present invention could be
5 implemented in several different ways and the apparatus disclosed above is only illustrative of the before embodiment invention and is in no way a limitation.

C L A I M S

We Claim:

- 1 1. A method of providing message notification for a user in an instant messaging
2 system comprising the steps of:
 - 3 a. registering a message notification application to at least one instant messaging
4 service;
 - 5 b. signing a user onto the message notification application by adding the user to a
6 buddy list of the message notification application; and
 - 7 c. sending an instant message notification to the user when a message arrives for
8 the user.
- 1 2. The method as claimed in claim 1 wherein the step of sending an instant
2 message notification is performed by sending the instant message notification to the user
3 through the at least one instant messaging service.
- 1 3. The method as claimed in claim 1 further comprising the step of retrieving the
2 message by accessing a server.
- 1 4. The method as claimed in claim 3 wherein the server is one of an application,
2 a voice messaging and a unified messaging server.
- 1 5. The method as claimed in claim 3 further comprising the step of accessing the
2 server by one of sending a request to the message notification application and using a
3 telephone.
- 1 6. The method as claimed in claim 3 further comprising the step of retrieving
2 messages from the server by an internet appliance.
- 1 7. The method as claimed in claim 3 further comprising the step of deleting a
2 message using the internet appliance without retrieving the message from the server.
- 1 8. An apparatus for providing message notification where and when a user is
2 most likely to hear or see notification and allowing the user to instantly review new messages
3 comprising:
 - 4 a. at least one instant messaging service;
 - 5 b. a message notification application having a buddy list and registered to the at
6 least one instant messaging service;

- 7 c. a server for storing messages and providing a medium for the message
8 notification application to operate; and
9 d. an internet appliance to access the server and receive an instant message
10 notification.

1 9. The apparatus as claimed in claim 8 wherein in response to a user signing up
2 to receive messages with the message notification application the user is automatically added
3 to the buddy list of the message notification application.

1 10. The apparatus as claimed in claim 8 wherein the message notification
2 application sends the user the instant message notification through the at least one instant
3 messaging service when a message arrives for the user.

1 11. The apparatus as claimed in claim 8 further comprising means for retrieving
2 the message from the server by one of sending a request to the message notification
3 application and using a telephone.

1 12. The apparatus as claimed in claim 8 wherein the server is one of an
2 application, a voice messaging and a unified messaging server.

1 13. The apparatus as claimed in claim 8 further comprising means for deleting the
2 message using the internet appliance without retrieving the message from the server.

1 14. A message notification system that operates where and when a user is most
2 likely to hear or see notification and allowing the user to instantly review new messages
3 comprising:
4 a. at least one instant messaging service;
5 b. a message notification application having a buddy list and registered to the at
6 least one instant messaging service;
7 c. a server for storing messages and providing a medium for the message
8 notification application to operate; and
9 d. an internet appliance to access the server and receive an instant message
10 notification.

1 15. The message notification system as claimed in claim 14 wherein in response to
2 a user signing up to receive messages with the message notification application the user is
3 automatically added to the buddy list of the message notification application.

1 16. The message notification system as claimed in claim 14 wherein the message
2 notification application sends the user the instant message notification through the at least one
3 instant messaging service when a message arrives for the user.

1 17. The message notification system as claimed in claim 14 further comprising
2 means for retrieving the message from the server by one of sending a request to the message
3 notification application and using a telephone.

1 18. The message notification system as claimed in claim 14 wherein the server is
2 one of an application, a voice messaging and a unified messaging server.

1 19. The message notification system as claimed in claim 14 further comprising
2 means for deleting the message using the internet appliance without retrieving the message
3 from the server.

1 20. A message notification system for a user in an instant messaging system
2 comprising:
3 a. means for registering a message notification application to at least one instant
4 messaging service;
5 b. means for signing a user onto the message notification application by adding
6 the user to a buddy list of the message notification application; and
7 c. means for sending an instant message notification to the user when a message
8 arrives for the user.

1 21. The message notification system as claimed in claim 20 wherein the instant
2 message notification is sent to the user by the message notification application through the at
3 least one instant messaging service.

1 22. The message notification system as claimed in claim 20 further comprising
2 means for the user to retrieve the message by accessing a server.

1 23. The message notification system as claimed in claim 22 wherein the server is
2 one of an application, a voice messaging and a unified messaging server.

1 24. The message notification system as claimed in claim 22 wherein the user
2 accesses the server by one of sending a request to the message notification application and
3 using a telephone.

1 25. The message notification system as claimed in claim 22 wherein the message
2 is retrieved from the server by an internet appliance.

1 26. The message notification system as claimed in claim 22 further comprising the
2 step of deleting the message using the internet appliance without retrieving the message from
3 the server.

1 27. A method of providing a voice messaging notification application for a user in
2 an instant messaging system comprising the steps of:

- 3 a. registering a message notification application to at least one instant messaging
4 service;
- 5 b. adding a user to a buddy list of the instant messaging service;
- 6 c. sending an instant message notification to the user when a message arrives for
7 the user; and
- 8 d. allowing the user access to a server by one of using an internet appliance and
9 using a telephone.

1/1

FIG. 1

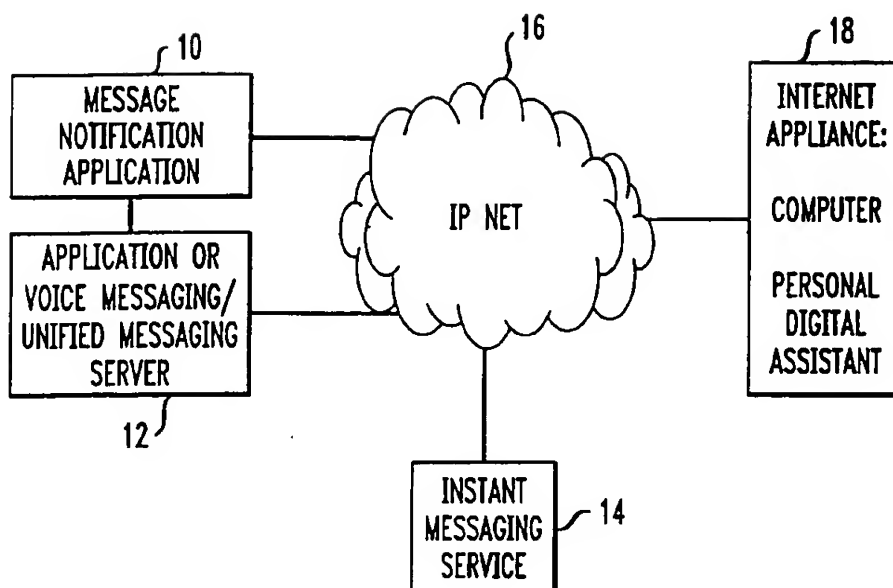


FIG. 2

